



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,109	11/25/2003	Birthe Noergaard Laursen	6495-40	6104

7590 01/26/2005

Richard R. Michaud
McCormick, Paulding & Huber LLP
City Place II
185 Asylum Street
Hartford, CT 06103

EXAMINER

HOGAN, JAMES SEAN

ART UNIT PAPER NUMBER

3752

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/721,109	LAURSEN ET AL.	
	Examiner	Art Unit	
	James S Hogan	3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 3,10,11,15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/25/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-5, 7-9, rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,736,893 to Nørskov. In view of U.S. Patent No. 5,499,766 to Foster et al.

Referring to claims 1-2, Nørskov ('893) teaches a nozzle for an oil burner, having a housing (4) with a nozzle opening (5) and a distributing insert (14). The insert lies on the housing in the area of the nozzle opening. Nørskov ('893) DOES NOT teach the insert being held in the housing with the help of a deformed housing section by a deformable element. Foster et al ('766) teaches a nozzle assembly where a fluidic projection (42), formed as a tube (claim 7), acting as the aforementioned distributing insert, is held in place by a cylindrical sleeve (36) which acts as the deformable element, with the help of an annular ring (32), acting in this case, as the deformed housing section. As for claim 2, the annular ring tensions the sleeve towards the nozzle opening. As for claim 4, the sleeve defines a flow path. As for claim 5, the sleeve defines a fluid chamber (42) (space) on the end that neighbors the fluid projection. As for claim 6, the flow path of Foster et al. ('766) passes outwardly through the sleeve at the passages on the inside of the sleeve (40). As for claim 8 and 9, the sleeve has a

Art Unit: 3752

first section with a large diameter and a second section with a diameter smaller than the first section's diameter, between which is a transitional section with an inclined wall. It would have been obvious to one skilled in the art at the time the invention was made to have modified the oil burning nozzle of Nørskov ('893) with the tension-bearing sleeve of Foster et al in order to minimize the risk of the distributing element allowing fluid to leak between it and the nozzle housing.

3. Claims 12 –13 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,736,893 to Nørskov. In view of U.S. Patent No. 5,499,766 to Foster et al. and further in view of U.S. Patent 2,055,864 to Harsch.

Referring to claims 12 and 13, the rejections of obviousness stand for claims 1-2 above. However, neither the devices of Nørskov ('893) nor of Foster et al ('766) teach the use of a spring as a deformable element. The device of Harsch ('864) utilizes a helical compression spring (25) to press the distribution element (i.e. plug 25) against the conical inside of the housing (15). It would have been obvious to one skilled in the art at the time the invention was made to have modified the oil burning nozzle of Nørskov ('893) with the tension-bearing sleeve of Foster et al ('766) and the helical compression spring of Harsch ('864) in order to minimize the risk of the distributing element allowing fluid to leak between it and the nozzle housing.

Claims 11-12, 14 and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,736,893 to Nørskov. In view of U.S. Patent No. 5,499,766 to Foster et al. and further in view of U.S. Patent 4,613,079 to Mains.

Art Unit: 3752

Referring to claims 14, 15, the rejections of obviousness stand for claims 1-2 above. However, neither the devices of Nørskov ('893) nor of Foster et al ('766) teach the use of a plate spring as a deformable element. The device of Mains ('079) teaches a nozzle tip with a distributing insert (swirl plug 38), held in place by a disc-shaped filter (54) acting as a plate spring. It would have been obvious to one skilled in the art at the time the invention was made to have modified the oil burning nozzle of Nørskov ('893) with the tension-bearing sleeve of Foster et al ('766) and the disc filter/plate spring of Mains ('079) in order to minimize the risk of the distributing element allowing fluid to leak between it and the nozzle housing.

Allowable Subject Matter

4. Claims 3, 10,11 and 15 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows:

U.S. Patent No. 4,989,790 to Martin et al. disclosing a nozzle cap and body assembly

U.S. Patent No. 3,672,578 to Wayne, disclosing a nozzle


Art Unit: 3752

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S Hogan whose telephone number is (571) 272-4902. The examiner can normally be reached on Mon-Fri, 7:00a-4:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSH
1/12/2005



David A. Scherbel
Supervisory Patent Examiner
Group 3700